

CLAIMS

1. A method of making an electrical connector, the method comprising:
providing at least one conductor;
5 weaving the at least one conductor with at least one loading fiber to define a woven connector, whereby the at least one conductor comprises multiple, distinct contact points; and
biasing at least one of the distinct contact points with the at least one loading fiber, such that when the connector is connected to a mating connector, at least one of the
10 distinct contact points is urged toward a mating conductor of the mating connector, yet the at least one of the distinct contact points can move away from the mating conductor.
2. The method of claim 1, wherein providing at least one conductor comprises providing multiple conductors and wherein weaving the at least one conductor with at
15 least one loading fiber comprises weaving multiple conductors with the multiple loading fibers.
3. The method of claim 1, further comprising extending the at least one loading fiber in a direction substantially perpendicular to the at least one conductor, at least in a region
20 of a contact point.
4. The method of claim 2, further comprising terminating each of the multiple conductors to a common termination contact.
- 25 5. The method of claim 2, wherein weaving the multiple conductors with the multiple loading fibers comprises passing a first loading fiber over a first conductor and under a second, adjacent conductor and passing a second, adjacent loading fiber under the first conductor and over the second, adjacent conductor.
- 30 6. The method of claim 1, further comprising tensioning the at least one loading fiber.

7. The method of claim 6, wherein tensioning the at least one loading fiber comprises mechanically coupling the at least one loading fiber to a spring element.
8. The method of claim 2, further comprising electrically isolating a first set of the multiple conductors from a second set of the multiple conductors.
9. The method of claim 8, further comprising terminating each of the multiple conductors in the first set to a first common termination contact and terminating each of the multiple conductors in the second set to a second common termination contact.
10. The method of claim 8, further comprising electrically shielding the multiple conductors of the first set from the multiple conductors of the second set.
11. The method of claim 1, further comprising forming the at least one conductor with undulations along a length thereof.
12. The method of claim 1, wherein weaving the at least one conductor with at least one loading fiber produces undulations along a length of the at least one conductor.
13. The method of claim 1, wherein biasing the at least one of the distinct contact points with the at least one loading fiber comprises biasing the at least one of the distinct contact points with at least one elastic loading fiber.
14. The method of claim 1, further comprising forming the woven connector into a tubular form.
15. The method of claim 2, further comprising forming the woven connector into a tubular form.
16. The method of claim 2, further comprising spacing at least one of the multiple conductors and multiple loading fibers to provide particle traps.

17. The method of claim 1, wherein biasing the at least one of the distinct contact points with the at least one loading fiber comprises biasing the multiple, distinct contact points such that each one of the multiple, distinct contact points can move away from the mating conductor independently of another one of the multiple, distinct contact points
5 moving away from the mating conductor.

18. A method of establishing an electrical connection, comprising:
providing a first connector having at least one conductor interwoven with at least one loading fiber, the first connector having distinct contact points on the conductor for
10 contacting a mating conductor of a second connector;
engaging at least one of the distinct contact points with the mating conductor to establish the electrical connection; and
biasing at least one of the distinct contact points with the at least one loading fiber to urge the at least one of the distinct contact points toward the mating conductor of the
15 second connector to provide a contact force for maintaining the electrical connection between the at least one of the distinct contact points and the mating conductor.

19. The method of claim 18, further comprising biasing the at least one of the distinct contact points upon engaging the at least one of the distinct contact points with the mating
20 conductor.

20. The method of claim 18, further comprising pre-tensioning the at least one loading fiber.

25 21. The method of claim 18, wherein engaging the distinct contact points with the mating conductor tensions the at least one loading fiber.

22. The method of claim 21, wherein engaging at least some of the distinct contact points with a mating conductor of a second connector comprises engaging at least some
30 of the distinct contact points of the multiple conductors with a common, mating conductor.

23. The method of claim 18, wherein providing at least one conductor comprises providing multiple conductors, each interwoven with multiple loading fibers.

24. The method of claim 23, wherein engaging at least one of the distinct contact points with the mating conductor to establish the electrical connection comprises
5 engaging at least one of the distinct contact points of a first set of the multiple conductors with a first mating conductor of the second connector and engaging at least one of the distinct contact points of a second set of the multiple conductors, that is electrically isolated from the first set of the multiple conductors, with a second mating conductor of
10 the second connector that is electrically isolated from the first mating conductor of the second connector.

25. The method of claim 18, further comprising registering the first connector with the second connector.

15

26. The method of claim 23, wherein providing a first connector having multiple conductors interwoven with at multiple loading fiber comprises providing a first connector in a tubular shape and wherein engaging at least one of the distinct contact points with the mating conductor of the second connector comprises engaging the tubular
20 formed first connector with a correspondingly tubular shaped second connector.